

Applicant : Satoshi Seo et al.
Serial No. : 10/801,113
Filed : March 16, 2004
Page : 2 of 6

Attorney Docket No.: 12732-0220001 / US7048

Amendments to the Drawings

The attached replacement sheet of drawings includes changes to Fig. 6 and replaces the sheet including Fig. 6 filed February 11, 2009.

Attachments following last page of this Amendment:

Replacement Sheet (1 page)

REMARKS

Claims 1-3 and 5-27 are pending with claims 1-3 and 5-8 being independent. Claims 5-7 have been withdrawn, leaving claims 1-3 and 8-27 under consideration with claims 1-3 and 8 being independent.

Applicant acknowledges with appreciation the allowance of claims 1-3 and 9-27.

AMENDMENTS TO THE DRAWINGS

The replacement for Fig. 6 filed February 11, 2009 was objected to because portions of the drawing are unclear. A replacement sheet for Fig. 6 is included with this filing.

No new matter has been introduced by these amendments.

35 U.S.C. § 103 REJECTION OVER MIYAZAWA IN VIEW OF AIZAWA

Claim 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Miyazawa (US 2003/0127974) in view of Aizawa (US 2003/0127656). Applicant disagrees with this rejection.

The Office Action relies upon Miyazawa to teach organic electroluminescent devices comprising host materials such as CBP, DCTA, and TCPB. The Office Action also notes that Miyazawa does not expressly teach that the fluorescent pigment may be a carbazole-containing luminescent compound. In fact, Miyazawa teaches: “When the luminescence [sic] substances represented by the chemical formula (11) are used as the guest material, favorably used host materials include CBP, DCTA and TCBP represented by the chemical formula (12), and DPVBi and Alq₃, as described above.” Miyazawa, para. [0206]. Chemical formula (11) of Miyazawa includes Ir(ppy)₃, Pt(thpy)₂, and PtOEP. Thus, Miyazawa teaches a carbazole-containing host material, but does not teach—or even suggest—a carbazole-containing guest material to be used in combination with the carbazole-containing host material.

Aizawa teaches a carbazole-containing luminescent material (BCzVBi) for use in a blue light emitting layer. However, like Miyazawa, Aizawa does not teach—or even suggest—

combining a carbazole-containing host material and a carbazole-containing guest material in an electroluminescent layer.

The Office Action states: “It would have been obvious to one of ordinary skill in the art to have formed a device according to Miyazawa et al having a host such as CBP, DCTA, or TCPB and to have selected a luminescent substance such as BCxVBi as the luminescent material and to have expected to achieve a well-functioning device with a predictable result, because Miyazawa et al. teaches the formation of a light emitting layer comprising CBP, DCTA or TCPB together with further light emitting substances to form a light emitting layer for a light emitting device.” Office Action, at 5.

According to M.P.E.P. 2143.01.IV, “A statement that modifications of the prior art to meet the claimed invention would have been ‘well within the ordinary skill of the art’ at the time the claimed invention was made’ because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). ‘[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.’ *KSR*, 550 U.S. at ___, 82 USPQ2d at 1396 quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006).”

The Examiner’s statements are conclusory. In fact, the Examiner has failed to identify any teaching, suggestion, or motivation that would have led one of ordinary skill to choose a guest/host combination in which both the guest and the host share a common skeleton, particularly a carbazole skeleton. The Examiner has also failed to address how one of ordinary skill in the art might have chosen the carbazole derivative of Aizawa from the essentially infinite number of possible blue-light-emitting substances absent a motivation to choose a guest/host combination in which both the guest and the host share a common skeleton. The Examiner has simply pieced together the elements of the claimed invention by using Applicants’ disclosure as a roadmap, and has therefore engaged in impermissible hindsight reasoning.

The Examiner further states: “Applicant claims a combination that only unites old elements with no change in the respective functions of those old elements, and the combination of those elements yields predictable results; absent evidence that the modifications necessary to effect the combination of elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a).” Office Action at 5.

However, this statement ignores aspects of Applicant’s teachings of improved results obtained by using host materials and guest materials which have a skeleton common to each other for an electroluminescent element. FIGS. 8-10 of the Application establish that the improved results for a guest/host combination with a common skeleton vs. a guest/host combination without a common skeleton are in fact unexpected and unobvious and of both statistical and practical significance. Thus, the Examiner’s premise that the combination of host materials and guest materials which have a skeleton common to each other yield predictable results is without basis.

For at least these reasons, a *prima facie* case of obviousness has not been established. As such, Applicant respectfully requests withdrawal of the § 103(a) rejection of claim 8 as being unpatentable over Miyazawa in view of Aizawa.

CONCLUSIONS

All claims in the application are now in condition for allowance.

Applicant : Satoshi Seo et al.
Serial No. : 10/801,113
Filed : March 16, 2004
Page : 6 of 6

Attorney Docket No.: 12732-0220001 / US7048

Please apply any other charges or credits to Deposit Account No. 06-1050, referencing Attorney Docket No. 12732-0220001.

Respectfully submitted,

Date: July 6, 2009

/Heather L. Flanagan/
Heather L. Flanagan, Ph.D.
Reg. No. 54,101

Fish & Richardson P.C.
One Congress Plaza
Suite 810
111 Congress Avenue
Austin, TX 78701
Telephone: (512) 472-5070
Facsimile: (512) 320-8935